PHILOSOPHICAL MAGAZINE A, 1997, VOL. 75, NO. 6, 1725–1728

SUBJECT INDEX

Vol. 75

	PAGE
Adhesion increase by interface mixing	369
Ag and Cu, defect clusters in	1567, 1583
Al dislocations in	733
Al, nanometre voids and holes in	69
Al, slip energy barriers in	1117
Al, Tl implanted in, structure of	1533
Al_2O_3–Nb interfaces, structure of	1329, 1357
AlCoNi, phase transformations in	1665
AlCoPd, quasicrystals of	273
AlCuFe, diffusion of Fe in	1287
AlCuMgAg, growth kinetics of	1641
AlLi alloys, growth of	939
Alloys, $L1_2$, cross-slip in	823
Alloys, shape memory, stress in	1193
AlN, domain boundaries in	1005
AlPdMn, phase transformations in	1603
AlPdMn quasicrystals, indentations in	1171
Amorphous SiH, vapour-deposited	331
Au-deposited Si, surface reconstruction of	105
B2 phase decomposition in TiAlV	657
$BaTiO_3$, ferroelectric domains in	611
Bcc alloy, random, correlation in	201
Beta phase decomposition in NbAl	637
Binary ordered alloy, diffusion in	1641
Boron diffusion in Si, dislocations in	115
Brittle materials, elastic response of	1041
Brittle–ductile behaviour of materials	749
CAlMnNi approximant, model of	379
Correlation in a random bcc alloy	201
Crack tips, cleavage at	771
Crack tips, dislocation nucleation from	341
Cracks, fatigue, simulation of	1517
Creep in CrMo steels	847
CrMo steels, creep in	847
Crystallization of SbGeO films	791
Cu and Ag, defect clusters in	1567, 1583
Cu in Fe, vacancies in	1097
Cu_3Au and Ni_3Al, dislocations in	1625
CuAlBe shape memory alloys	1237
Cube slips in Ni_3Ge	563
Decagonal phases in AlCoNi	1665
Decagonal phases in AlPdMn	1677
Decomposition in NiZrNi	677
Defect clusters in Ag and Cu	1715
Defect clusters in Zn	1153
Defects and diffusion in NiAl	169, 187

Defects in Ni_3Al 1603
Defects, nanoscale, in transparent solids. 1383
Deformation in Ti alloys 587
Deformation in TiAl 395, 621
Deformation mechanisms in $MoSi_2$ 1, 17
Diamond, displacement in 1553
Diffusion in a binary ordered alloy 1715
Diffusion in FeNd 959
Diffusion processes in Pd–Ta glasses 49
Diffusion, intracrystalline, under stress 1221
Dislocation nucleation from crack tips 341
Dislocation pile-ups, moments of 469
Dislocation structures, modelling of 1251
Dislocations in a Ni-based superalloys 61
Dislocations in Cu_3Au and Ni_3Al 1625
Dislocations in lattice mismatched layers 1461
Dislocations in $L1_2$ alloys 1263
Dislocations in TiAl 1299
Displacement in diamond 1553
Domain boundaries in AlN 1005

Elastic response of brittle materials 1041
Emission and cleavage at crack tips. 771

Fatigue cracks, simulation of 1517
Fcc metals, liquid–vapour interface of 1067
Fe in AlCuFc, diffusion of. 1287
Fe, Cu in, vacancies in 1097
FeCu, point defects in. 713
Feldspar, oxygen diffusion in 485
FeNd, diffusion in 959
Ferroelectric domains in $BaTiO_3$ 611
Ferroelectrics, phase growth in 1391
FeS_2 pyrites, stoichiometry of 1129
Fractal structure in tooth enamel 1023
Frank–Kasper quasicrystal phase 861

GaAs and Si, pore formation in 525
GaAs, ZnS films on, stacking faults in 1209
GaAs/InGaAs, In segregation in 803
Glass formation of Ni. 1057
Grain boundaries in NiAl 1689
Grain boundaries in $Ni_3(Al_{0.8}Ti_{0.2})$ 1403, 1417
Grain growth, normal, theories of 301
Growth kinetics of AlCuMgAg. 1641
Growth of AlLi alloys 939

Hall–Petch effects in TiAl 87
HAlN/HSiC interface, defects in 239
Hydrogen precipitates in Si 137
Hydrogenated silicon, growth of 31

In segregation in InGaAs/GaAs 803
Interatomic force laws, modelling of 749
Interface mixing, adhesion increase by 369
Interface structures of NiTi 315
Interface structure in TiAl. 1447
Intracrystalline diffusion under stress 1221

Lattice mismatch layers, dislocations in 1461
$L1_2$ alloys, dislocations in 1263
$L1_2$ ordered alloys, cross-slip in 823
$L1_2$-type Ni_3 (Al,Ta), microanalysis of 153

Metals, fcc, liquid–vapour interface of 1067
Misfit accommodation in spinels 889, 909
$MoSi_2$ deformation mechanisms in 1, 17

Nanometre voids and holes in Al 69
Nanoscale defects in transparent solids 1383
Nb–Al_2O_3 interfaces, structure of 1329, 1357
NbAl, decomposition in 637
Ni, diffusion of into NiZr 461
Ni, glass formation of. 1057
Ni_3(Al,Ta), $L1_2$-type, microanalysis of 153
$Ni_3(Al_{0.8}Ti_{0.2})$, grain boundaries in 1403, 1417
Ni_3Al and Cu_3Au, dislocations in 1625
Ni_3Al, defects in 1603
Ni_3Al, shear failure in. 443
Ni_3Ge, cube slips in 563
NiAl, defects and diffusion in 169, 187
NiAl, grain boundaries in 1689
NiTi, interface structures of 315
NiZr, diffusion of Ni into 461
NiZrNi, decomposition in 677
Normal grain growth, theories of 301

Orthorhombic CAlMnNi approximant 379
Oxygen vacancies in Si–SiO_2 1435

Pd–Ta glasses, diffusion processes in 49
Peierls stress, theory of 703
Phase growth in ferroelectrics 1391
Phase stability in SrO–$SrTiO_3$ 833
Point defects in FeCu 713
Polygonization in single glide 541
Polytypism in III–V semiconductors 239
Polytypoid formation in YBaCuO 285
Pyrites, FeS_2, stoichiometry of 1129

Quasicrystalline AlPdMn, indentations in 1171
Quasicrystalline Frank–Kasper phase 861
Quasicrystals of AlCoPd 273
Quasicrystals, stress in 425

Sanidine feldspar, oxygen diffusion in 485
Sapphire, TiO_2 in. 221
SbGeO films, crystallization of. 791
Shape memory alloys of CuAlBe 1237
Shape memory alloys, stress in 1193
Shear failure in Ni_3Al. 443
Si and GaAs, pore formation in 525
Si, Au-deposited, surface reconstruction of 105
Si, boron diffusion in, dislocations in 115
Si, hydrogen precipitates in 137
Si–SiO_2, oxygen vacancies in 1435
SiGe, twinned wedges in 925

SiH, amorphous vapour-deposited 331
Silicon, hydrogenated, growth of 31
Single glide, polygonization in 541
Site occupancy in TiNi compounds 1185
Sn implanted in Ti 993
Spinels, misfit accommodation in 889, 909
SrO–$SrTiO_3$, phase stability in 833
Stress factor in dislocation pile-ups 469
Stress in icosahedral quasicrystals 425
Stress, Peierls, theory of 703
Superalloys, Ni-based, dislocations in 61
Superconducting YBaCuO, properties of 505

Ti alloys, deformation in 587
Ti, Sn implanted in 993
Ti, tilt grain boundaries in 261
TiAl, deformation in 395, 621
TiAl, dislocations in 1299
TiAl, Hall–Petch effects in 87
TiAl, interfacial structure in 1447
TiAl, twin interfaces in 975
TiAlV, phase decomposition in 657
Tilt grain boundaries in hcp Ti 261
TiNi compounds, site occupancy in 1185
TiO_2 in sapphire 221
Tl implanted in Al, structure of 1533
Tooth enamel, fractal structure in 1023
Twin interfaces in TiAl 975
Twinned wedges in SiGe 925
Twins in Zn, defects in 1075

YBaCuO, mechanical properties of 505
YBaCuO, polytypoid formation in 285

Zn, defects in 1153, 1075
ZnS on GaAs, stacking faults in 1209

PHILOSOPHICAL MAGAZINE A, 1997, VOL. 75, NO. 6, 1729–1737

INDEX OF AUTHORS
(WITH TITLES OF PAPERS)

Vol. 75

PAGE

Abe, E., Kajiwara, S., Kumagai, T., and Nakamura, M.: High-resolution electron microscopy of twin interfaces in massively transformed γ-TiAl 975
Abromeit, C., *see* Müller, S.
Ackland, G. J., Bacon, D. J., Calder, A. F., and Harry, T.: Computer simulation of point defect properties in dilute Fe–Cu alloy using a many-body interatomic potential 713
Afonso, C. N., *see* Morilla, M. C.
Al-Hazmi, F., *see* Mergia, K.
Alcobé, X., *see* Jurado, M.
Amazit, Y., Perrin, B., Fischer, M., Itie, J. P., and Polian, A.: X-ray diffraction measurements in icosahedral Al–Pd–Mn up to 40 GPa 1677
An, G. Y., *see* Liu, H. B.
Andersen, H. H., *see* Sørensen, A. H.
Anderson, P. M., *see* Shastry, V.
Angelo, J. E., *see* Medlin, D. L.
Argon, A. S., *see* Xu, G.
Arnold, M., Wang, Z. L., Tong, W., Wagner, B. K., Schön, S., and Summers, C. J.: Formation of stacking faults in ZnS thin films epitaxially grown on GaAs(001) 1209
Asaro, R. J., *see* Dao, M.
Asaro, R. J., *see* Kad, B. K.

Bacon, D. J., *see* Ackland, G. J.
Bacon, D. J., *see* Gao, F.
Bacon, D. J., *see* Mikhin, A. G.
Bai, Y., *see* Hong, Y.
Barts, D. B., and Carlson, A. E.: Simulation and theory of polygonization in single glide 541
Bassas, J., *see* Jurado, M.
Baumgarte, A., Schreuer, J., Estermann, M. A., and Steurer, W.: X-ray diffraction study of decaprismatic Al–Co–Ni crystals as a function of composition and temperature 1665
Behar, M., *see* Pérez, R. A.
Belova, I. V., and Murch, G. E.: The Manning relations for atomic diffusion in a binary ordered alloy 1715
Benson, W. E., and Howe, J. M.: An in-situ high-resolution transmission electron microscopy study of the growth and dissolution of $\Theta_{\{111\}}$ precipitate plates in an Al–Cu–Mg–Ag alloy 1641
Bergman, C., *see* Joulaud, J.-L.
Bergström, L., *see* Price, P. B.
Bernardini, J., *see* Joulaud, J.-L.
Bøttiger, J., *see* Karpe, N.
Bourdelle, K. K., *see* Sørensen, A. H.
Boureau, G., *see* Carniato, S.
Braisaz, T., Ruterana, P., Nouet, G., and Pond, R. C.: Investigation of $\{10\bar{1}2\}$ twins in Zn using high-resolution electron microscopy: interfacial defects and interactions 1075
Bullough, T. J.: Sputtering and the formation of nanometre voids and holes in aluminium in a scanning transmission electron microscope 69

Calder, A. F., *see* Ackland, G. J.
Calvayrac, Y., *see* Joulaud, J.-L.
Carius, R., *see* Luysberg, M.
Carlson, A. E., *see* Barts, D. B.
Carlsson, A. E., *see* Thomson, R.
Carniato, S., Boureau, G., and Harding, J. H.: Modelling oxygen vacancies at the Si(100)–SiO_2 interface 1435
Carter, C. B., *see* Medlin, D. L.
Castán, T., *see* Jurado, M.
Chandrasekaran, M., Ghosh, G., Schryvers, D., De Graef, M., Delaey, L., and Van Tendeloo, G.: Decomposition of a metastable bcc phase in rapidly solidified Ni–9 at.% Zr and Ni–8 at.% Zr–1 at.% X alloys 677
Chen, K. Y., *see* Liu, H. B.
Chen, Z. J., *see* Mitra, A.
Cherns, D., Kaneko, K., Hovsepian, A., and Lang, A.: Measurement of the lattice displacement across {100} platelets in diamond by large-angle convergent-beam electron diffraction 1553
Chung, S. J., *see* Park, B. M.
Cocks, A. C. F., *see* Gill, S. P. A.
Colin, J., Junqua, N., and Grilhé, J.: Adhesion increase by interface mixing . . 369
Comstock Jr, R. J., *see* Somerday, M.
Conyers, J. S., *see* Karpe, N.
Corbett, J. M., *see* McCaffrey, J. P.
Coujou, A., *see* Priester, L.
Cowley, R. A., *see* Jain, S. C.
Cui, S. F., Iida, S., Luo, G. M., Mai, Z. H., and Kawata, H.: Static Debye–Waller factor analysis of hydrogen precipitates in silicon 137

Dahmen, U., *see* Xiao, S. Q.
Dao, M., Kad, B. K., and Asaro, R. J.: Mechanism of intense shear stress failure in Ni_3Al single crystals 443
De Diego, N., *see* Mikhin, A. G.
De Graef, M., *see* Chandrasekaran, M.
Delaey, L., *see* Chandrasekaran, M.
Desgardin, G., *see* Tancret, F.
Deus, C., Wolf, B., and Paufler, P.: On the orientation dependence of crack-like failure formation near indentations on an icosahedral Al–Pd–Mn quasicrystal 1171
Devincre, B., Veyssière, P., Kubin, L. P., and Saada, G.: A simulation of dislocation dynamics and of the flow stress anomaly in $L1_2$ alloys 1263
Dilger, C., Mikulla, R., Roth, J., and Trebin, H.-R.: Simulation of shear stress in icosahedral quasicrystals 425
Dimiduk, D. M., *see* Simmons, J. P.
Doole, R. C., *see* Morilla, M. C.
Dorfman, S., *see* Gordon, A.
Dubois, J.-M., *see* Joulaud, J.-L.
Dudley, M., *see* Park, B. M.
Dunne, F. P. E., Nanneh, M. M., and Zhou, M.: Anisothermal large deformation constitutive equations and their application to modelling titanium alloys in forging 587
Dyment, F., *see* Pérez, R. A.

Ellmer, K., and Höpfner, C.: On the stoichiometry of the semiconductor pyrite (FeS_2) 1129
Emori, H., *see* Takasugi, T.
Emori, H., Takasugi, T., and Hiraga, K.: High-resolution electron microscopy of grain boundaries in $Ni_3(Al_{0.8}Ti_{0.2})$ bicrystals. I. [001] Small-angle tilt boundaries 1403

Erb, U., *see* Zugic, R.
Estermann, M. A., *see* Baumgarte, A.
Evans, D. J., Scheltens, F. J., Woodhouse, J. B., and Fraser, H. L.: Deformation mechanisms in $MoSi_2$ at temperatures above the brittle-to-ductile transition temperature. I. Polycrystalline $MoSi_2$ 1
Evans, D. J., Scheltens, F. J., Woodhouse, J. B., and Fraser, H. L.: Deformation mechanisms in $MoSi_2$ at temperatures above the brittle-to-ductile transition temperature. II. Single crystal $MoSi_2$ 17

Fang, B., *see* Hong, Y.
Farkas, D., *see* Mishin, Y.
Finger, F., *see* Luysberg, M.
Fischer, F. D., *see* Schlögl, S. M.
Fischer, M., *see* Amazit, Y.
Fonda, R. W., Yan, M., and Luzzi, D. E.: A study of grain-boundary structure in non-stoichiometric NiAl by atomistic simulation and electron microscopy . 1689
Fraser, H. L., *see* Evans, D. J.
Freer, R., Wright, K., Kroll, H., and Göttlicher, J.: Oxygen diffusion in sanidine feldspar and a critical appraisal of oxygen isotope-mass-effect measurements in non-cubic materials 485
Fuks, D., *see* Gordon, A.
Fukushima, H., Jenkins, M. L., and Kirk, M. A.: On the determination of the nature of defect clusters produced by displacement cascades. Part I. A critique of the two-and-a-half-dimensional technique as applied to small clusters in silver and copper 1567
Fukushima, H., Jenkins, M. L., and Kirk, M. A.: On the determination of the nature of defect clusters produced by displacement cascades. Part II. Application of stereo imaging techniques to heavy-ion damage in copper 1583

Gao, F., and Bacon, D. J.: Defect production by near-surface displacement cascades in Ni_3Al 1603
Gao, H., *see* Müllner, P.
Garcia G., R., *see* Reyes-Gasga, J.
Gas, P., *see* Joulaud, J.-L.
Ghosh, G., *see* Chandrasekaran, M.
Gill, S. P. A., and Cocks, A. C. F.: An investigation of mean-field theories for normal grain growth 301
Gong, Y. D., *see* Liu, H. B.
Gordon, A., Dorfman, S., and Fuks, D.: Non-equilibrium diagrams of phase growth for smart materials 1391
Göttlicher, J., *see* Freer, R.
Gratias, D., *see* Joulaud, J.-L.
Greer, A. L., *see* Karpe, N.
Grilhé, J., *see* Colin, J.
Grimes, R. W., *see* McCoy, M. A.
Gu, Z., *see* Hong, Y.
Gutekunst, G., Mayer, J., and Rühle, M.: Atomic structure of epitaxial Nb–Al_2O_3 interfaces. I. Coherent regions 1329
Gutekunst, G., Mayer, J., Vitek, V., and Rühle, M.: Atomic structure of epitaxial Nb–Al_2O_3 interfaces. II. Misfit dislocations. 1357

Hapke, P., *see* Luysberg, M.
Harding, J. H., *see* Carniato, S.
Harker, A. H., *see* Jain, S. C.
Harry, T., *see* Ackland, G. J.
Henley, C. L., *see* Roth, J.
Hesse, D., *see* Sieber, H.
Heuer, A. H., *see* Xiao, S. Q.

Hiraga, K., *see* Emori, H.
Hiraga, K., *see* Takasugi, T.
Hiraga, K., *see* Yubuta, K.
Hong, Y., Gu, Z., Fang, B., and Bai, Y.: Collective evolution characteristics and computer simulation of short fatigue cracks 1517
Höpfner, C., *see* Ellmer, K.
Horita, Z., McCartney, M. R., and Kuninaka, H.: Channelling-enhanced microanalysis using [111] and [001] zone-axis beam incidence for $L1_2$-type $Ni_3(Al, Ta)$. 153
Hovsepian, A., *see* Cherns, D.
Howe, J. M., *see* Benson, W. E.
Hu, Z. Q., *see* Liu, H. B.
Hu Zhuang Qi, *see* Xu Dong Sheng

Iida, S., *see* Cui, S. F.
Inui, H., Matsumuro, M., Wu, D.-H., and Yamaguchi, M.: Temperature dependence of yield stress, deformation mode and deformation structure in single crystals of TiAl (Ti–56 at.% Al) 395
Inui, H., *see* Siegl, R.
Itie, J. P., *see* Amazit, Y.

Jain, S. C., Harker, A. H., and Cowley, R. A.: Misfit strain and misfit dislocations in lattice mismatched epitaxial layers and other systems 1461
Jenkins, M. L., *see* Fukushima, H.
Jenkins, M. L., *see* Müller, S.
Jiles, D. C., *see* Mitra, A.
Johansen, A., *see* Sørensen, A. H.
Johnson, E., *see* Sørensen, A. H.
Joulaud, J.-L., Bernardini, J., Gas, P., Bergman, C., Dubois, J.-M., Calvayrac, Y., and Gratias, D.: Volume and grain-boundary self-diffusion of Fe in Al–Cu–Fe icosahedral quasicrystals 1287
Jumonji, K., *see* Ueta, S.
Junqua, N., *see* Colin, J.
Jurado, M., Castán, T., Mañosa, L., Planes, A., Bassas, J., Alcobé, X., and Morin, M.: Study of the order–disorder phase transitions in Cu–Al–Be shape memory alloys 1237

Kad, B. K., and Asaro, R. J.: Apparent Hall–Petch effects in polycrystalline lamellar TiAl 87
Kad, B. K., *see* Dao, M.
Kajiwara, S., *see* Abe, E.
Kamino, T., Yaguchi, T., Tomita, M., and Saka, H.: *In-situ* high-resolution electron microscopy study on a surface reconstruction of Au-deposited Si at very high temperatures 105
Kanazawa, K., *see* Ueta, S.
Kaneko, K., *see* Cherns, D.
Karpe, N., Bøttiger, J., Krog, J. P., Conyers, J. S., Greer, A. L., and Somekh, R. E.: Study of the diffusion of Ni into amorphous $Ni_{50}Zr_{50}$ and the resulting strain formation 461
Kato, M., *see* Ueta, S.
Kawata, H., *see* Cui, S. F.
Kaxiras, E., *see* Sun, Y.
Khalfallah, O., *see* Priester, L.
Kim, H. S., *see* Park, B. M.
Kirk, M. A., *see* Fukushima, H.
Kirkaldy, J. S., *see* Savva, G. C.
Kishida, K., *see* Siegl, R.
Knott, J. F., *see* Streitenberger, P.
Krastev, V., *see* Toneva, A.

Krog, J. P., *see* Karpe, N.
Kroll, H., *see* Freer, R.
Krstic, V. D., *see* Zugic, R.
Kubin, L. P., *see* Devincre, B.
Kumagai, T., *see* Abe, E.
Kuninaka, H., *see* Horita, Z.
Kuo, K. H., *see* Sui, H. X.

Laabs, F., *see* Mitra, A.
Lang, A., *see* Cherns, D.
Lee, W. E., *see* McCoy, M. A.
Li Dong, *see* Xu Dong Sheng
Liddle, J. A., *see* Ross, F. M.
Lifshits, V. O., *see* Rozhanskii, N. V.
Liu, H. B., Chen, K. Y., Gong, Y. D., An, G. Y., and Hu, Z. Q.: Properties of the liquid–vapour interface of fcc metals calculated using the tight-binding potential 1067
Lu, J., and Szpunar, J. A.: Applications of the embedded-atom method to glass formation and crystallization of liquid and glass transition-metal nickel . . 1057
Luo, G. M., *see* Cui, S. F.
Luysberg, M., Hapke, P., Carius, R., and Finger, F.: Structure and growth of hydrogenated microcrystalline silicon: investigation by transmission electron microscopy and Raman spectroscopy of films grown at different plasma excitation frequencies 31
Luzzi, D. E., *see* Fonda, R. W.

Macaulay, J. M., *see* Ross, F. M.
Mai, Z. H., *see* Cui, S. F.
Mañosa, L., *see* Jurado, M.
Marinova, Ts., *see* Toneva, A.
Matsumuro, M., *see* Inui, H.
Mayer, J., *see* Gutekunst, G.
McCaffrey, J. P., Wasilewski, Z. R., Robertson, M. D., and Corbett, J. M.: Measurement of indium segregation in strained $In_xGa_{1-x}As/GaAs$ quantum wells by transmission electron microscopy 803
McCartney, M. R., *see* Horita, Z.
McColl, I. R., *see* Zhang, D.
McCoy, M. A., Grimes, R. W., and Lee, W. E.: Phase stability and interfacial structures in the SrO–$SrTiO_3$ system 833
Medlin, D. L., Carter, C. B., Angelo, J. E., and Mills, M. J.: Climb and glide of $a/3$ ⟨111⟩ dislocations in an aluminium $\Sigma = 3$ boundary 733
Mergia, K., Al-Hazmi, F., Stewart, R. J., and Messoloras, S.: *In-situ* small-angle neutron scattering study of the growth and dissolution of precipitates in Al–Li alloys 939
Messoloras, S., *see* Mergia, K.
Mikhin, A. G., De Diego, N., and Bacon, D. J.: Defect clusters in Zn: a computer simulation study 1153
Mikulla, R., *see* Dilger, C.
Mills, M. J., *see* Medlin, D. L.
Mishin, Y., and Farkas, D.: Atomistic simulation of point defects and diffusion in B2 NiAl. Part I. Point defect energetics. 169
Mishin, Y., and Farkas, D.: Atomistic simulation of point defects and diffusion in B2 NiAl. Part II. Diffusion mechanisms 187
Mishin, Y., and Farkas, D.: Monte Carlo simulation of correlation effects in random bcc alloy 201
Mitra, A., Chen, Z. J., Laabs, F., and Jiles, D. C.: Micromagnetic Barkhausen emissions in 2·25 wt% Cr–1 wt% Mo steel subjected to creep. 847
Morilla, M. C., Afonso, C. N., Petford-Long, A. K., and Doole, R. C.: The role of oxygen content in the crystallization kinetics of $(Sb_{0·90}Ge_{0·10})O_x$ films. . . 791

Morin, M., *see* Jurado, M.
Morkoç, H., *see* Vermaut, P.
Müller, S., Jenkins, M. L., Abromeit, C., and Wollenberger, H.: The influence of the surface on the production and development of displacement cascades in Ni_3Al and Cu_3Au 1625
Müllner, P., Gao, H., and Ozkan, C. S.: A twinned wedge in a Si–Ge epitaxial film: twofold $\Sigma = 9$ twinning 925
Murch, G. E., *see* Belova, I. V.

Nabarro, F. R. N.: Theoretical and experimental estimates of the Peierls stress . 703
Nakamura, M., *see* Abe, E.
Nanneh, M. M., *see* Dunne, F. P. E.
Nenova, Z., *see* Toneva, A.
Ning, X. J.: Dislocations induced by boron diffusion in silicon: a transmission electron microscopy study 115
Nouet, G., *see* Braisaz, T.
Nouet, G., *see* Vermaut, P.

Ortiz, M., *see* Xu, G.
Osetsky, Yu. N., and Serra, A.: Study of copper precipitates in α-iron by computer simulation. III. The evolution of vacancies within precipitates. 1097
Oskam, G., *see* Ross, F. M.
Osterstock, F., *see* Tancret, F.
Ozkan, C. S., *see* Müllner, P.

Park, B. M., Chung, S. J., Kim, H. S., Si, W., and Dudley, M.: Synchrotron white-beam X-ray topography of ferroelectric domains in a $BaTiO_3$ single crystal . 611
Passa, E., Shao, G., and Tsakiropoulos, P.: Beta phase decomposition in Nb–17 at.% Al alloy 637
Paufler, P., *see* Deus, C.
Pérez, R. A., Behar, M., and Dyment, F.: Diffusion study of Sn implanted in α-Ti 993
Perrin, B., *see* Amazit, Y.
Petford-Long, A. K., *see* Morilla, M. C.
Planes, A., *see* Jurado, M.
Polian, A., *see* Amazit, Y.
Pond, R. C., *see* Braisaz, T.
Price, P. B., and Bergström, L.: Enhanced Rayleigh scattering as a signature of nanoscale defects in highly transparent solids 1383
Priester, L., Khalfallah, O., and Coujou, A.: Image force on a dislocation in a Ni-based superalloy due to the γ–γ' interface 61
Püschl, W., *see* Schoeck, G.

Rabier, J.: Stress driven polytypoid formation in $YBa_2Cu_3O_{7-\delta}$ 285
Rao, S. I., *see* Simmons, J. P.
Reyes-Gasga, J., Garcia G., R., and Vargas-Ulloa, L.: *In-situ* observation of fractal structures and electrical conductivity in human tooth enamel 1023
Rickman, J. M., and Viñals, J.: Modelling of dislocation structures in materials . 1251
Robertson, M. D., *see* McCaffrey, J. P.
Ross, F. M., Oskam, G., Searson, P. C., Macaulay, J. M., and Liddle, J. A.: Crystallographic aspects of pore formation in gallium arsenide and silicon . 525
Roth, J., *see* Dilger, C.
Roth, J., and Henley, C. L.: A new binary decagonal Frank–Kasper quasicrystal phase 861
Rozhanskii, N. V., and Lifshits, V. O.: Transmission electron microscopy study of diffusion processes in thin films of Pd–Ta metallic glasses deposited onto Si . 49
Rühle, M., *see* Gutekunst, G.
Ruterana, P., *see* Braisaz, T.
Ruterana, P., *see* Vermaut, P.

Saada, G., *see* Devincre, B.
Saka, H., *see* Kamino, T.
Sarholt-Kristensen, L., *see* Sørensen, A. H.
Sato, A., *see* Ueta, S.
Savva, G. C., Kirkaldy, J. S., and Weatherly, G. C.: Interface structures of internally nitrided Ni–Ti 315
Scheltens, F. J., *see* Evans, D. J.
Schlögl, S. M., and Fischer, F. D.: The role of slip and twinning in the deformation behaviour of polysynthetically twinned crystals of TiAl: a micromechanical model 621
Schoeck, G., and Püschl, W.: The activation energy for {111} cross-slip in Ll_2 ordered alloys 823
Schön, S., *see* Arnold, M.
Schreuer, J., *see* Baumgarte, A.
Schryvers, D., *see* Chandrasekaran, M.
Searson, P. C., *see* Ross, F. M.
Serra, A., *see* Osetsky, Yu. N.
Shao, G., and Tsakiropoulos, P.: Ultra-thin twin plates and growth domain in the γ phase as a product of the B2 phase decomposition in Ti–40 at.% Al–10 at.% V 657
Shao, G., *see* Passa, E.
Shastry, V., and Anderson, P. M.: Interaction between emission and cleavage at crack tips 771
Shimizu, I.: The non-equilibrium thermodynamics of intracrystalline diffusion under non-hydrostatic stress 1221
Si, W., *see* Park, B. M.
Sieber, H., Hesse, D., and Werner, P.: Misfit accommodation mechanisms at moving reaction fronts during topotaxial spinel-forming thin-film solid-state reactions: a high-resolution transmission electron microscopy study of five spinels of different misfits. 889
Sieber, H., Werner, P., and Hesse, D.: The atomic structure of the reaction front as a function of the kinetic regime of a spinel-forming solid-state reaction . . . 909
Siegl, R., Vitek, V., Inui, H., Kishida, K., and Yamaguchi, M.: Directional bonding and asymmetry of interfacial structure in intermetallic TiAl: combined theoretical and electron microscopy study 1447
Simmons, J. P., Rao, S. I., and Dimiduk, D. M.: Atomistics simulations of structures and properties of $\frac{1}{2}\langle 110\rangle$ dislocations using three different embedded-atom method potentials fit to γ-TiAl 1299
Somekh, R. E., *see* Karpe, N.
Somerday, M., Comstock Jr, R. J., and Wert, J. A.: A systematic analysis of transformation stress anisotropy in shape memory alloys 1193
Song Yan, *see* Xu Dong Sheng
Sørensen, A. H., Johnson, E., Bourdelle, K. K., Johansen, A., Andersen, H. H., and Sarholt-Kristensen, L.: Sizes, structures and phase transformations of nano-sized thallium inclusions in aluminium 1533
Steurer, W., *see* Baumgarte, A.
Stewart, R. J., *see* Mergia, K.
Streitenberger, P., and Knott, J. F.: On the calculation of moments of dislocation pile-ups from the stress intensity factor 469
Sui, H. X., Sun, K., and Kuo, K. H.: A structural model of the orthorhombic C_{3l}-$Al_{60}Mn_{11}Ni_4$ approximant 379
Summers, C. J., *see* Arnold, M.
Sun, K., *see* Sui, H. X.
Sun, W., *see* Yubuta, K.
Sun, Y., and Kaxiras, E.: Slip energy barriers in aluminium and implications for ductile–brittle behaviour 1117
Szpunar, B., *see* Zugic, R.
Szpunar, J. A., *see* Lu, J.

Takasugi, T., Emori, H., and Hiraga, K.: High-resolution electron microscopy of grain boundaries in $Ni_3(Al_{0.8}Ti_{0.2})$ bicrystals. II. Coincidence site lattice boundaries 1417
Takasugi, T., *see* Emori, H.
Tanaka, M., *see* Yan, Y.
Tancret, F., Desgardin, G., and Osterstock, F.: Influence of porosity on the mechanical properties of cold isostatically pressed and sintered $YBa_2Cu_3O_{7-x}$ superconductors 505
Terauchi, M., *see* Yan, Y.
Thomson, R., and Carlsson, A. E.: The brittle–ductile behaviour of materials: modelling the effect of interatomic force laws 749
Tomita, M., *see* Kamino, T.
Toneva, A., Nenova, Z., Marinova, Ts., and Krastev, V.: X-ray photoelectron spectroscopy study of post-hydrogenated homogeneous chemically vapour-deposited amorphous silicon films 331
Tong, W., *see* Arnold, M.
Trebin, H.-R., *see* Dilger, C.
Tsakiropoulos, P., *see* Passa, E.
Tsakiropoulos, P., *see* Shao, G.

Ueta, S., Jumonji, K., Kanazawa, K., Kato, M., and Sato, A.: Cube slips and anomalous strengthening in Ni_3Ge single crystals 563

Van Tendeloo, G., *see* Chandrasekaran, M.
Vargas-Ulloa, L., *see* Reyes-Gasga, J.
Vermaut, P., Ruterana, P., Nouet, G., and Morkoç, H.: Structural defects due to interface steps and polytypism in III–V semiconducting materials: a case study using high-resolution electron microscopy of the 2H-AlN/6H-SiC interface . 239
Veyssière, P., *see* Devincre, B.
Viñals, J., *see* Rickman, J. M.
Vitek, V., *see* Gutekunst, G.
Vitek, V., *see* Siegl, R.

Wagner, B. K., *see* Arnold, M.
Wang, Y. C., and Ye, H. Q.: On the tilt grain boundaries in hcp Ti with [0001] orientation 261
Wang, Z. L., *see* Arnold, M.
Wasilewski, Z. R., *see* McCaffrey, J. P.
Weatherly, G. C., *see* Savva, G. C.
Werner, P., *see* Sieber, H.
Wert, J. A., *see* Somerday, M.
Wolf, B., *see* Deus, C.
Wollenberger, H., *see* Müller, S.
Wood, J. V., *see* Zhang, D.
Woodhouse, J. B., *see* Evans, D. J.
Wright, K., *see* Freer, R.
Wu, D.-H., *see* Inui, H.

Xiao, S. Q., Dahmen, U., and Heuer, A. H.: Phase transformation of TiO_2 precipitates in sapphire (α-Al_2O_3) induced by the loss of coherency 221
Xu Dong Sheng, Song Yan, Li Dong, and Hu Zhuang Qi: Site occupancy of alloying elements in TiNi compounds 1185
Xu, G., Argon, A. S., and Ortiz, M.: Critical configurations for dislocation nucleation from crack tips 341

Yaguchi, T., *see* Kamino, T.
Yamaguchi, M., *see* Inui, H.
Yamaguchi, M., *see* Siegl, R.

Yan, M., *see* Fonda, R. W.
Yan, Y., Terauchi, M., and Tanaka, M.: The structures of inversion domain boundaries in AlN ceramics 1005
Ye, H. Q., *see* Wang, Y. C.
Yubuta, K., Sun, W., and Hiraga, K.: A new crystalline phase related to decagonal quasicrystals with non-central symmetry in Al–Co–Pd alloys 273

Zhang, D., McColl, I. R., and Wood, J. V.: Diffusion reactions in the iron–neodymium binary alloy system 959
Zhou, M., *see* Dunne, F. P. E.
Zugic, R., Szpunar, B., Krstic, V. D., and Erb, U.: Effect of porosity on the elastic response of brittle materials: an embedded-atom method approach . . . 1041